

IN THE CLAIMS

No Amendments are made to the claims, which are reproduced for the Examiner's convenience below:

1. A method of transmitting a data segment in a data stream using a write module which implements a selected one of a plurality of versions of a streaming protocol wherein each subsequent version of the streaming protocol is additive to a previous version, the method comprising the steps of:

- (a) outputting a first stream of data according to a first version of the streaming protocol;
- (b) sequentially appending additional streams of data to the first stream of data according to each subsequent version of the streaming protocol up to and including the selected version, if the selected version of the streaming protocol is not the first version of the streaming protocol; and
- (c) delimiting the data segment in the data stream using begin and end tags.

2. The method of claim 1, further comprising the step of receiving the data segment from a data stream using a read module of the type which implements a second selected one of the plurality of versions of the streaming protocol, the receiving step including the steps of:

- receiving the first stream of data;
- if the second selected version is earlier than the first selected version, receiving each additional stream of data according to each subsequent version of the streaming protocol up to and including the second selected version, and disregarding any remaining data in the data segment;
- if the second selected version is equal to or later than the first selected version, sequentially receiving the additional streams of data according to each subsequent version of the streaming protocol up to and including the second selected version; and
- testing, prior to receiving each additional stream of data, whether an end of the data segment has been detected, and if so, terminating reception of the data segment prior to receiving the additional stream of data according to the second selected version.

3. The method of claim 2, wherein the data segment is an object.

4. The method of claim 3, wherein the data segment includes all of the data necessary to reconstruct the object; whereby the data stream is serial.

5. The method of claim 3, wherein the testing step includes the step of initializing object data that is not received from the data stream to a default value.

6. The method of claim 3, further comprising the steps of:
transmitting an object type for the data segment; and
receiving the object type, including allocating and initializing an object when receiving the data segment based upon the object type.

7. The method of claim 2, wherein the read and write modules are resident on the same computer.

8. The method of claim 2, wherein the read and write modules are resident on separate computers.

9. (CANCELED)

10. The method of claim 1, wherein no additional tags are embedded in the data segment between the begin and end tags.

11. The method of claim 1, further comprising the steps of:
determining whether the data segment is stored in a current context for the data stream;
if so, transmitting an alias tag in lieu of the data segment; and
if not, storing the data segment in the current context.

12. The method of claim 1, wherein the data stream is a non-random access data stream.

13. A method of receiving a data segment from a data stream using a read module which implements a selected one of a plurality of versions of a streaming protocol wherein each subsequent version of the streaming protocol is additive to a previous version, the method comprising the steps of:

- (a) receiving a first stream of data according to a first version of the streaming protocol;
- (b) if the selected version of the streaming protocol is not the first version of the streaming protocol, sequentially receiving additional streams of data according to each subsequent version of the streaming protocol up to and including the selected version; and
- (c) testing, prior to receiving each additional stream of data, whether an end of the data segment has been detected, and if so, terminating reception of the data segment prior to receiving the additional stream of data according to the selected version.

14. The method of claim 13, further comprising the step of, if the end of the data segment has not been detected upon receiving the additional stream of data according to the selected version, disregarding any remaining data in the data segment.

15. The method of claim 14, further comprising the step of storing the data segment in a current context, including any disregarded data therefrom.

16. The method of claim 13, wherein the data segment is an object.

17. The method of claim 16, wherein the testing step includes the step of initializing object data that is not received from the data stream to a default value.

18. The method of claim 16, further comprising the steps of:
receiving an object type for the data segment; and
allocating and initializing an object based upon the object type to build the object from the streams of data in the data segment.

19. A computer system that transmits data segment in a data stream, the computer system comprising a write module that implements a selected one of a plurality of versions of a streaming protocol wherein each subsequent version of the streaming protocol is additive to a previous version, and that outputs the data segment in the data stream, wherein:

(a) the write module comprising means for outputting a first stream of data according to a first version of the streaming protocol;

(b) the write module comprising means for sequentially appending additional streams of data to the first stream of data according to each subsequent version of the streaming protocol up to and including the selected version, if the selected version of the streaming protocol is not the first version of the streaming protocol; and

(c) the write module comprising means for delimiting the data segment in the data stream using begin and end tags.

20. The computer system of claim 19, wherein the data segment is an object.

21. The computer system of claim 19, wherein the write module further comprises means for transmitting an object type for the data segment.

22. (CANCELED)

23. The computer system of claim 19, wherein the write module further comprises means for transmitting an alias tag in lieu of the data segment if the data segment is stored in a current context for the data stream.

24. A computer system that receives a data segment from a data stream, the computer system comprising a read module that implements a selected one of a plurality of versions of a streaming protocol wherein each subsequent version of the streaming protocol is additive to a previous version, and that receives the data segment from the data stream, wherein the read module comprises:

- (a) means for receiving a first stream of data according to a first version of the streaming protocol;
- (b) means for sequentially receiving additional streams of data according to each subsequent version of the streaming protocol up to and including the selected version, if the selected version of the streaming protocol is not the first version of the streaming protocol; and
- (c) means for testing whether an end of the data segment has been detected, and if so, for terminating reception of the data segment prior to receiving the additional stream of data according to the selected version prior to receiving each additional stream of data.

25. The computer system of claim 24, wherein, if the end of the data segment has not been detected upon receiving the additional stream of data according to the selected version, the read module disregards any remaining data in the data segment.

26. The computer system of claim 24, wherein the data segment is an object.

27. The computer system of claim 26, wherein the read module comprises means for receiving an object type for the data segment and for allocating and initializing an object based upon the object type to build the object from the streams of data in the data segment.

28. A computer system comprising first and second computers that transmit a data segment in a data stream from the first computer to the second computer, the first computer comprising means for implementing a first selected one of a plurality of versions of a streaming protocol, and the second computer comprising means for implementing a second selected one of the plurality of versions of the streaming protocol, wherein the second selected one of the plurality of versions of the streaming protocol is additive to the first selected one of the plurality of versions of the streaming protocol, and wherein:

- (a) the first computer includes a write module for transmitting the data segment, wherein the write module outputs a first stream of data according to a first version of the streaming protocol, and if the first selected version is not the first version of the streaming protocol, the write module

sequentially appends to the first stream of data additional streams of data according to each subsequent version of the streaming protocol up to and including the first selected version; and

(b) the second computer includes a read module for receiving the data segment from the first computer, wherein the read module receives the first stream of data, wherein if the second selected version is earlier than the first selected version, the read module receives each additional stream of data according to each subsequent version of the streaming protocol up to and including the second selected version, and disregards any remaining data in the data segment, wherein if the second selected version is equal to or later than the first selected version, the read module sequentially receives the additional streams of data according to each subsequent version of the streaming protocol up to and including the second selected version, and wherein, prior to receiving each additional stream of data, the read module detects whether an end of the data segment has been detected, and if so, terminates reception of the data segment prior to receiving the additional stream of data according to the second selected version.

29. A program storage device, readable by a computer system and tangibly embodying one or more programs of instructions executable by the computer system to perform method steps of transmitting a data segment in a data stream in a format based upon a selected one of a plurality of versions of a streaming protocol wherein each subsequent version of the streaming protocol is additive to a previous version, the method comprising the steps of:

(a) outputting a first stream of data according to a first version of the streaming protocol;
(b) sequentially appending additional streams of data to the first stream of data according to each subsequent version of the streaming protocol up to and including the selected version, if the selected version of the streaming protocol is not the first version of the streaming protocol; and
(c) delimiting the data segment in the data stream using begin and end tags.

30. A program storage device, readable by a computer system and tangibly embodying one or more programs of instructions executable by the computer system to perform method steps of receiving a data segment from a data stream according to a selected one of a plurality of versions of a streaming protocol wherein each subsequent version of the streaming protocol is additive to a previous version, the method comprising the steps of:

- (a) receiving a first stream of data according to a first version of the streaming protocol;
- (b) sequentially receiving additional streams of data according to each subsequent version of the streaming protocol up to and including the selected version, if the selected version of the streaming protocol is not the first version of the streaming protocol; and
- (c) testing, prior to receiving each additional stream of data, whether an end of the data segment has been detected, and if so, terminating reception of the data segment prior to receiving the additional stream of data according to the selected version.

31. The method of claim 13, wherein the step of testing whether and end of the data segment has been detected comprises the step of testing for a premature end tag and terminating the reception of the data segment when a premature end tag is received.

32. The program storage device of claim 30, wherein the step of testing whether and end of the data segment has been detected comprises the step of testing for a premature end tag and terminating the reception of the data segment when a premature end tag is received.